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PATENT & TRADEMARK OFFICE

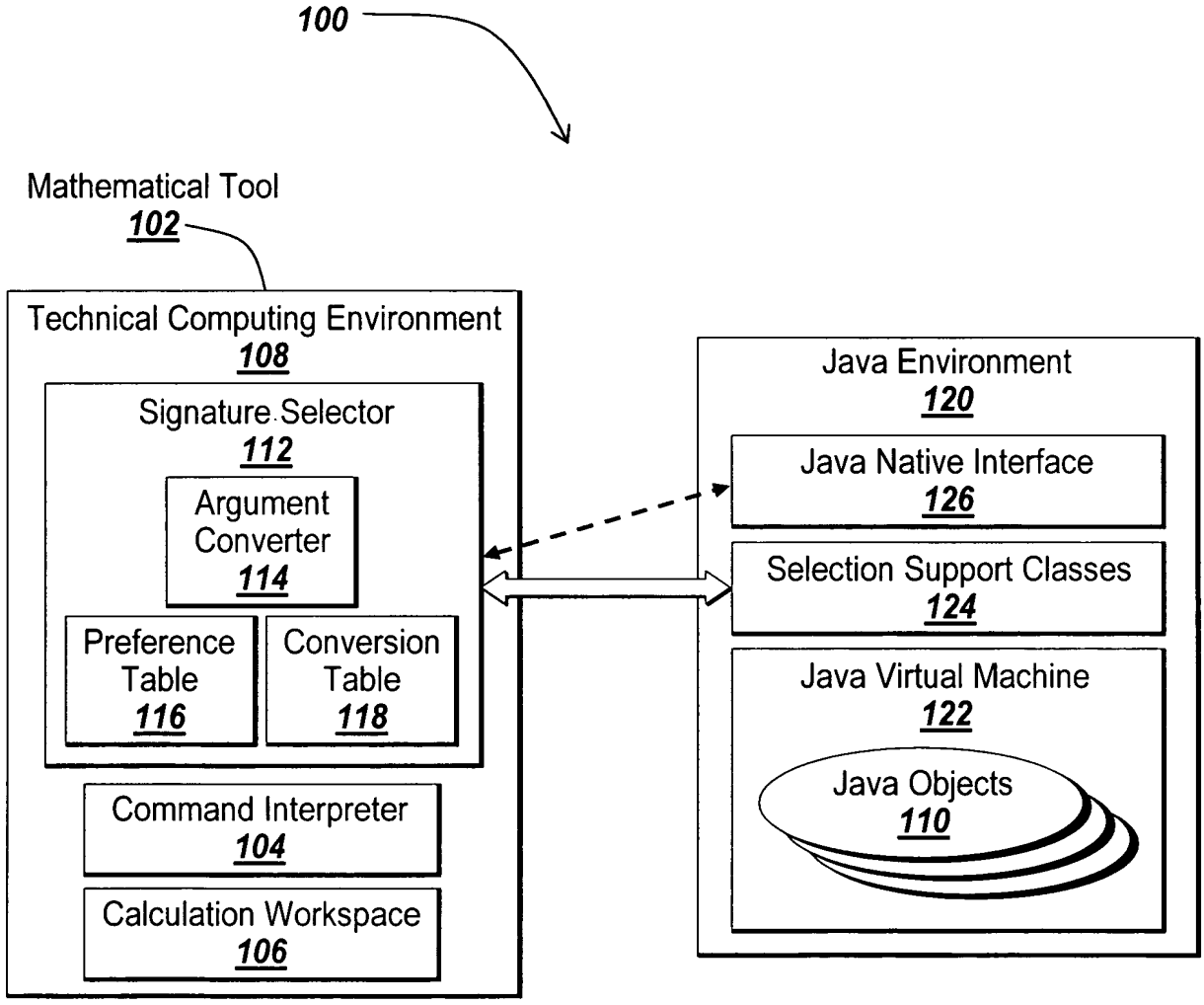

Fig. 1

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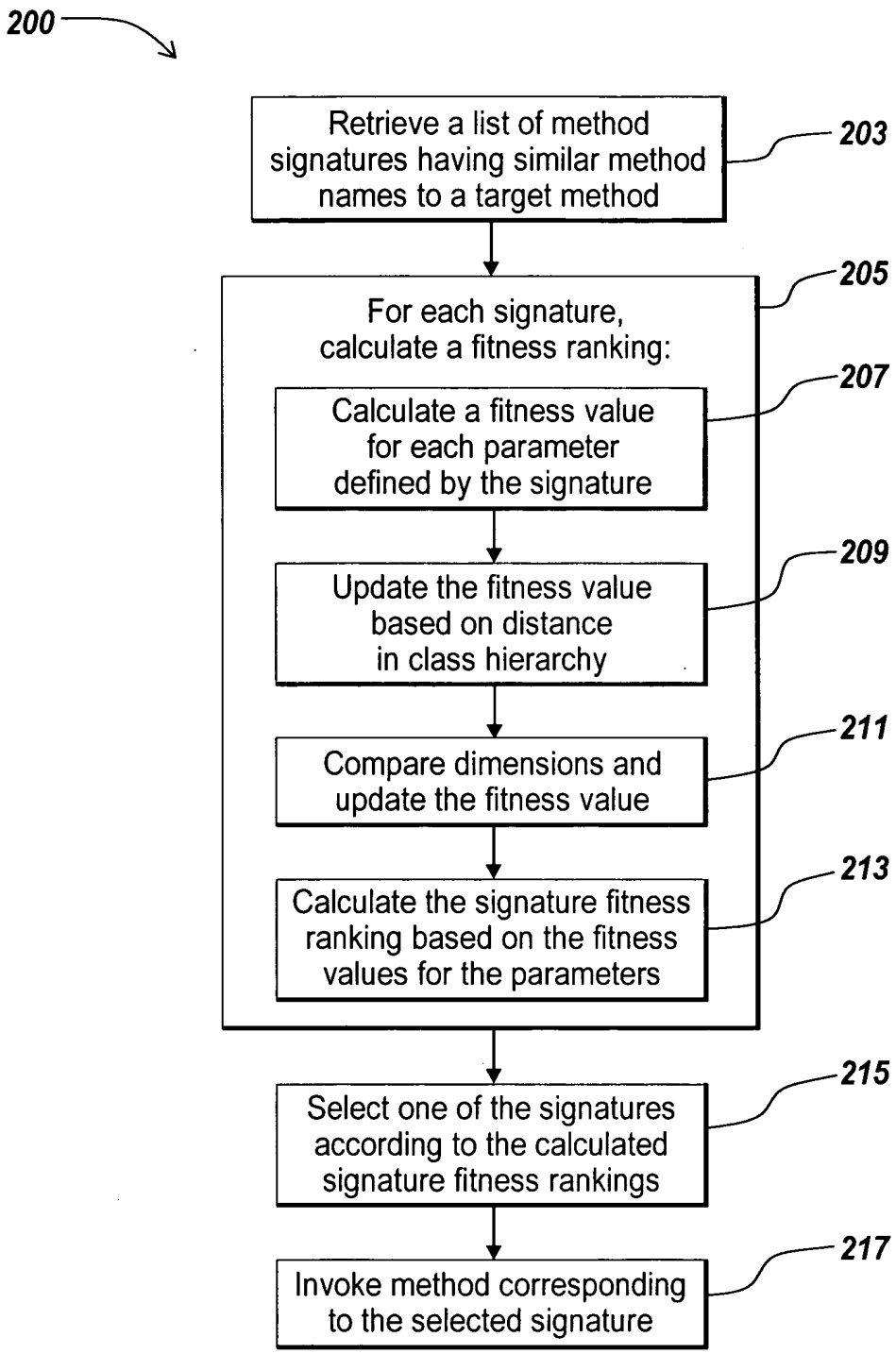
200
Retrieve a list of method signatures having similar method names to a target method
203
For each signature, calculate a fitness ranking:
205
Calculate a fitness value for each parameter defined by the signature
207
Update the fitness value based on distance in class hierarchy
209
Compare dimensions and update the fitness value
211
Calculate the signature fitness ranking based on the fitness values for the parameters
213
Select one of the signatures according to the calculated signature fitness rankings
215
Invoke method corresponding to the selected signature
217

Fig. 2

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Mathematical Tool Data Type	Java Data Type						
	Best Fit						Worst Fit
logical	boolean						
double	double	float	long	int	short	byte	boolean
single	float	double					
char	String	char					
array of char arrays	String						
array of arrays	Object						
unsigned 8-bit int	byte	short	int	long	float	double	
unsigned 16-bit int	short	int	long	float	double		
unsigned 32-bit int	int	long	float	double			
signed 8-bit int	byte	short	int	long	float	double	
signed 16-bit int	short	int	long	float	double		
signed 32-bit int	int	long	float	double			
java	Object						

Fig. 3

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Java Data Type	Mathematical Tool Data Type (for scalar Java types)	Mathematical Tool Data Type (for array Java types)
boolean	double precision floating point	boolean
byte	double precision floating point	8-bit signed integer
char	char	char (16-bit)
short	double precision floating point	16-bit signed integer
int	double precision floating point	32-bit signed integer
long	double precision floating point	double precision floating point
float	double precision floating point	double precision floating point
double	double precision floating point	double precision floating point
java.lang.String Object	char array	char array
Java object	Reference to Java object	Reference to Java object

Fig. 4

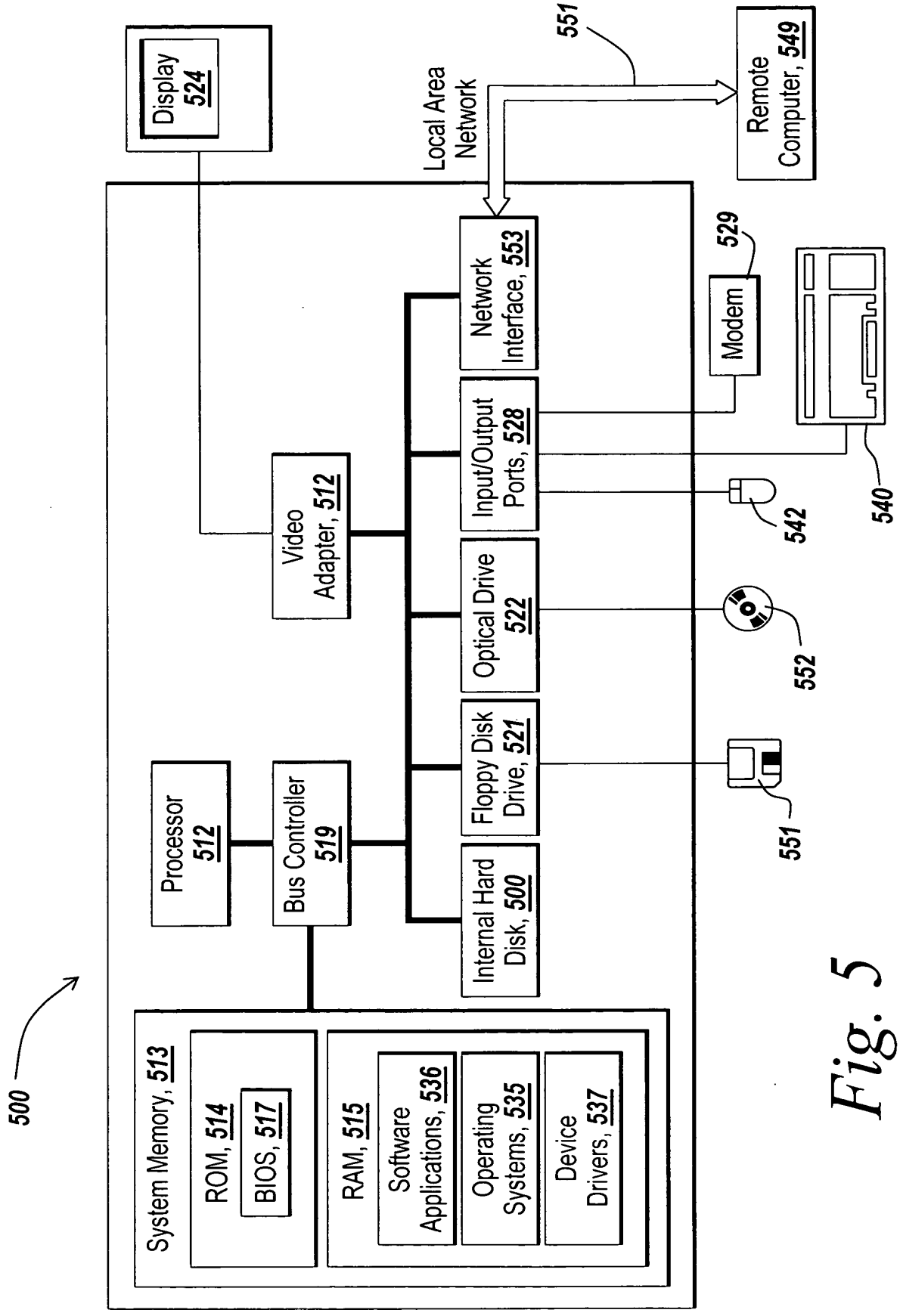
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Fig. 5